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The Impact of General Health Status of the Mothers on Healthy Lifestyle Behaviors in the First Year Postpartum

Doğum Sonrası Birinci Yılda Annelerin Genel Sağlık Durumunun Sağlıklı Yaşam Biçimi Davranışlarına Etkisi

Merve İÇÖZ[1]
Meral KILIÇ[2]

[1]Sakarya Üniversitesi, Ebelik Anabilim Dalı, Sakarya, Türkiye
[2]Atatürk Üniversitesi, Sağlık Bilimleri Fakültesi, Ebelik Anabilim Dalı, Erzurum, Türkiye

ABSTRACT

Objective: This study was conducted to examine the effect of mothers' general health status in the first year postpartum on healthy lifestyle behaviors.

Methods: The study was conducted in a descriptive type. The research was carried out with 350 mothers, who presented to the Sakarya Akyazı Family Health Center No. 3 between May 2019 and June 2019, met the inclusion criteria, and volunteered to participate in the study. The "Personal Information Form," "Healthy Lifestyle Behaviors Scale," and "General Health Questionnaire-12" were used for data collection.

Results: In the present study, the total mean Health-Promoting Lifestyle Profile scores of mothers were 123.89 ± 21.99. In the postpartum period, the General Health Questionnaire scores were detected to decrease as the "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," "Interpersonal Relationships," "Stress Management," and "Healthy Lifestyle Behaviors" scores increased. In the current study, the General Health Questionnaire mean score was determined to be 3.57 ± 3.09. The general health status of mothers in the postpartum period can be said to affect the Healthy Lifestyle Behaviors Scale and its subscales. It is recommended that midwives present attempts aiming to help mothers practice health-promoting behaviors in the postpartum period and that they carry out studies on the subject.

Conclusion: The general health status of mothers in the postpartum period can be said to affect the Healthy Lifestyle Behaviors Scale and its subscales. It is recommended that midwives present attempts aiming to help mothers practice health-promoting behaviors in the postpartum period and that they carry out studies on the subject.

Keywords: General health status, healthy lifestyle, midwifery, postpartum

ÖZ

Amaç: Bu araştırma doğum sonrası birinci yılda annelerin genel sağlık durumunun sağlıklı yaşam biçimi davranışlarına etkisini incelemek amacıyla yapılmıştır.

Yöntemler: Araştırma tanımlayıcı tipte yapılmıştır.Araştırma Sakarya Akyazı 3 Nolu Aile Sağlığı Merkezi'nde Mayıs 2019-Haziran 2019 tarihleri arasında başvuran araştırmaya dahil edilme kriterlerini karşılayan ve çalışmaya katılmaya gönüllü olan 350 anne ile yürütülmüştür.Verilerin toplanmasında "Kişisel Bilgi Formu," "Sağlıklı Yaşam Biçimi Davranışları (SYBD) Ölçeği" ve "Genel Sağlık Anketi 12"(GSA) ölçekleri kullanılmıştır.

Bulgular: Çalışmamızda annelerin SYBDÖ toplam puan ortalaması 123,89 ± 21,99 olduğu belirlenmiştir. Doğum sonrası dönemde kadınlarda "Sağlık Sorumluluğu," "Fiziksel Aktivite," "Beslenme," "Manevi Gelişim," "Kişilerarası İlişkiler," "Stres Yönetimi" boyutları ve "SYBD" puanları arttıkça GSA puanlarının azalmakta olduğu saptanmıştır. Çalışmamızda GSA puan ortalamasının 3,57 ± 3,09 olduğu belirlenmiştir. Doğum sonrası annelerde genel sağlık durumunun Sağlıklı Yaşam Biçimi Davranışları ve alt boyutlarını etkilediği söylenebilir. Ebelerin doğum sonrası annelere sağlığı teşvik edici davranış uygulamalarına yardımcı olmayı amaçlayan girişimleri sunması ve konu ile ilgili çalışmalar yapması önerilir.

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Corresponding Author/Sorumlu Yazar: Merve İÇÖZ
E-mail: ebeMeRvEyldz@hotmail.com

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Sonuç: Doğum sonrası annelere genel sağlık durumunun Sağlıklı Yaşam Biçimi Davranışları ve alt boyutlarını etkilediği söylenebilir. Ebelerin doğum sonrası annelere sağlığı teşvik edici davranış uygulamalarına yardımcı olmayı amaçlayan girişimleri sunması ve konu ile ilgili çalışmalar yapması önerilir.

Anahtar Kelimeler: Doğum sonu dönem, ebelik, genel sağlık, sağlıklı yaşam

Introduction

Women go through different periods such as childhood, adolescence, adulthood, and old age and experience some physical, mental, and social changes (Bilgiç & Can Gürkan, 2021). Among these life cycles, pregnancy, childbirth, and postpartum period are the periods with the highest risk of mortality and morbidity (Ünal et al., 2023). A healthy postpartum period is important for minimizing maternal and infant mortality rates. For this reason, healthy lifestyle behaviors are of great importance in ensuring that the postpartum period is free of problems in terms of maternal and child health and in preventing health problems that may occur (Öztaş & Sohbet, 2023).

A healthy lifestyle is defined as controlling all behaviors that may affect health and regulating appropriate behaviors for individuals in daily activities (Süt & Seçil, 2020). Healthy lifestyle behaviors can be listed as taking responsibility for health behaviors, balanced diet, adequate and regular exercise, not smoking, health responsibility, taking hygienic measures, establishing positive interpersonal relationships and stress management (Gözüyeşil et al., 2019). Mental well-being positively affects a healthy lifestyle. Studies have shown that individuals with healthy lifestyle behaviors reduce the rate of experiencing psychological problems such as anxiety and depression and increase protection from chronic diseases such as diabetes, heart diseases, and hypertension (Gökbulut & Bal, 2021). Healthy lifestyle behavior is of great importance in the protection and development of health in all life periods of women. One of these important periods is the postpartum period. The postpartum period, which begins soon after birth, represents a period of significant physical and emotional change with enormous responsibilities, challenges, and expectations (Lim et al., 2019). In the postpartum period, new arrangements are necessary for the woman to adapt to the baby's care routine and gradually return to physiological and metabolic conditions (Faria-Schützer et al., 2018). It is easier for mothers to adapt to changes and new regulations with healthy lifestyle behaviors. In this process, mothers need diet and physical activity to reach the ideal weight they want and healthy nutrition during the breastfeeding process, which is important for the development of the baby (Süt & Seçil, 2020). Increasing postnatal physical activity, healthy nutrition has a positive effect on mothers and their newborn babies in the postpartum period. It is also generally well known that physical activity makes a significant contribution to both the physical and mental well-being of mothers in the postpartum period (Apostolopoulos et al., 2021). In contrast, physical inactivity contributes to chronic stress and poor mental health. Postpartum mothers may delay performing physical activity while trying to spend most of their time providing adequate care for their babies, carrying out household chores, caring for other children, and fulfilling the role of spouse. This can increase the risk of exposing other disruptive disorders such as anxiety (Baattaiah et al., 2022). During lactation, mothers often complain of fatigue and shortened sleep time due to childcare. Physical activity during lactation can improve sleep quality, increase maternal vitality, and reduce maternal fatigue (Cabrera-Dominguez et al., 2022).

Postpartum is a stressful time for mothers. They must adapt to their new family situation, social identity, and role expectations as a mother (Asselmann et al., 2020). Social support during this period plays a positive role in maintaining the general health status of mothers. The social support received increases the adaptation to the role of motherhood, facilitates baby care, reduces the stress level, and facilitates relations with family members (Ertekin Pınar & Polat, 2019).

Leahy and colleagues, with professional support (e.g., midwives), found that informal support from family and friends was an important determinant of maternal mental health at 6 weeks postpartum (Inekwe & Lee, 2022). Social support is important in terms of protecting the physical and mental health of the mother and increasing the sense of trust in the role of mother (Ertekin Pınar & Polat, 2019). Zhang and Jin stated that support from family, friends, and others affects postpartum depression (Mercan & Tari Selçuk, 2021; Zhang & Jin, 2016).

Health education is the educational practices carried out with the aim of adopting and implementing measures aimed at healthy living, accustoming them to use health services and convincing people, reaching common decisions, and directing them to action in order to improve their environment.

Health education is the whole of interactions that encourage people to have a healthy lifestyle and takes place at every stage of health services. One of the duties of health professionals is to raise awareness of the society through health education and to teach healthy lifestyle behaviors.

Midwives are a significant resource in influencing mothers in the postpartum period (Ayyıldız & Ulupınar, 2019; Hacıvelioğlu & Demirci, 2022).

It is expected not only to be curative and caring but also to take an active role in the protection and maintenance of health. Midwifery interventions aimed at helping women practice health-promoting behaviors in the postpartum period can be important.

Few studies have revealed the healthy lifestyle behaviors of women in the postpartum period. Therefore, this study aimed to determine the effect of general health status on healthy lifestyle behaviors in the first year postpartum.

Methods

Type and Location of the Study

This is a cross-sectional study. The study was carried out between May 2019 and June 2019 at the Sakarya Akyazı Family Health Center No. 3. Eight family practice units serve in Akyazı Family Health Center No. 3. This family health center was selected since the number of registered mothers within the borders of Sakarya

Akyazı is high and there are mothers from different socioeconomic levels.

Population and Sample of the Study

The population of the study consists of 20,000 women registered at the Sakarya Akyazı Family Health Center No. 3. The study sample consists of 350 mothers, who applied to the Sakarya Akyazı Family Health Center No. 3 between May 2019 and June 2019, who agreed to participate in the study, and who were selected by calculating the number of required samples.

As a result of the calculations, 376 people were included in the sample. However, due to the unhealthy data provided by 26 people, the study was carried out by reducing the sample number to 350.

$$N = \frac{N * t^2 * p * q}{d^2 * (N-1) + t^{2*p*q}} = \frac{20000 * (1.96)^2 * (0.5) * (0.5)}{(0.05)^2 * (20000-1) + (1.96)^2 * (0.5) * (0.5)}$$

where,

N: Number of individuals in the mass (20,000),

***n*: Number of samples,**

p = Frequency of the event's occurrence (0.5),

q = Frequency of the event's non-occurrence (0.5),

d = Deviation that is wanted to be made according to the frequency of the event's occurrence (0.05), and

t = Theoretical value found in the *t* table at a certain degree of freedom and the determined error level (1.96).

Sample Selection Criteria

- Those who gave birth within one year
- Those without mental disabilities
- Illiterate
- Those who are not pregnant within one year of giving birth
- Have a healthy one-year old child

Data Collection Tools

The "Personal Information Form," "Healthy Lifestyle Behaviors Scale (HLBS)," and "General Health Questionnaire-12 (GHQ)" were used as data collection tools.

The Personal Information Form consists of 12 questions related to the sociodemographic characteristics of women. In this form, sociodemographic characteristics such as age, educational status, employment status, and social security and obstetric features such as the number of pregnancies and births are included.

The first version of the HLBS was developed by Walker et al. in 1987 (Bahar et al., 2008). It was revised by Walker et al. in 1996, and the revised version was called the Healthy Lifestyle Scale-II. There are 52 items and 6 dimensions on the scale. These are health responsibility, physical activity, nutrition, spiritual development, interpersonal relationships, and stress management. Scale rating is in a 4-point Likert type as follows: "never" (1), "sometimes" (2), "often" (3), and "regularly" (4). The lowest score that can be obtained from the scale is 52 and the highest score is 208 (Bahar et al., 2008). The validity and reliability study of the Turkish version of the scale was conducted by Esin in 1997 (Esin, 1997). Validity and reliability studies for Turkish people were performed by Bahar et al. in 2008 (Bahar et al., 2008). Cronbach's alpha coefficient was found to be 0.92. In the present study, Cronbach's alpha coefficient is also 0.92.

General Health Questionnaire-12

The GHQ, which was developed by Goldberg in the 1970s, is a method used to measure the risk of the development of psychiatric disorders. These are for measuring the person's inability to perform normal functions, the emergence of distress, and the well-being of a person (Goldberg, 1988; Montazeri et al., 2003). The full GHQ format is a 60-item test with a 4-point scale for each answer. The test is carried out in several alternative formats: GHQ-30 (30 items), GHQ-28 (28 items), and GHQ-12 (12 items) (Goldberg, 1988; Montazeri et al., 2003). Each item was rated on a 4-point scale (less than normal, not more than normal, more than normal, and much more than normal). In this study, as a popular scoring method, the bimodal scoring method was used. The highest score obtained from the scale is 12 and the lowest score is 0. In Turkey, the validity and reliability study of the Turkish version was carried out by Kılıç. Its validity and reliability studies demonstrated that sensitivity was 0.74 and specificity was 0.84 (Kılıç, 1996). In this study, Cronbach's alpha value was also found to be 0.82.

Data Collection

The institutional and ethics committee permission was obtained in order to carry out the study at the Sakarya Akyazı Family Health Center No. 3. In line with the obtained permissions, the data were obtained from mothers by the mutual interview method. The verbal informed consent of mothers was obtained by making explanations to them before the study. The participants were assured that the obtained data would be kept confidential. The collection of the data took approximately 25 minutes.

Evaluation of the Data

In the data analysis, 11 different statistical analyses were used, and these analyses were performed on the computer using the Statistical Package for the Social Sciences 22.00 (IBM SPSS Corp., Armonk, NY, USA) statistical software. These analyses were frequency, percentage, Pearson moment–product correlation analysis, linear regression analysis, Durbin–Watson test, *t*-test, one-way variance analysis, Dunnet's T3 post hoc test, LSD post hoc test, Kruskal–Wallis *H*-test, and Cronbach's alpha analysis.

Ethical Dimension of the Study

Before starting the study, written permission was obtained from the Ethics Committee of Erzurum Atatürk University, Faculty of Health Sciences (September 25, 2018 No: 04/1) and the institution where the study would be conducted. Mothers were informed about the study's objectives, and their verbal consent was obtained before the implementation of the interviews. Mothers were assured that the information they gave would be kept confidential and that they could withdraw from the study whenever they wanted.

Results

Of the mothers, 30% were 18–24 years old, 34.9% were 25–30 years old, 16.6% were 30–34 years old, and 18.6% were 35–44 years old. Of the mothers, 25.1% were primary school graduates, 54.3% were secondary school–high school graduates, and 20.6% were university graduates. Of them, 12.3% were employed and 87.7% were unemployed. While 87.1% of the mothers had social security, 12.9% did not have social security. The economic status of 20% of the mothers was good, the economic status of 70.9% was medium, and the economic status of 9.1% was poor (Table 1).

In Table 2, it is observed that the GHQ-12 mean score is 3.57 ± 3.09, "Health Responsibility" subscale mean score is 20.73 ± 4.77, "Physical Activity" subscale mean score is 12.27 ± 4.76, "Nutrition"

Table 1.
Distribution of the Descriptive Characteristics of Mothers (n = 350)

		n	%
Age	18–24 years	105	30.0
	25–30 years	122	34.9
	31–34 years	58	16.6
	35–44 years	65	18.5
Educational status	Primary school	88	25.1
	Secondary-high school	190	54.3
	Faculty-college	72	20.6
Employment status	Employed	43	12.3
	Unemployed	307	87.7
Social Security	Available	305	87.1
	Not available	45	12.9
Economic status	Good (income is more than expenses)	70	20.0
	Medium (income–expense balance)	248	70.9
	Poor (income is less than expenses)	32	9.1
Body mass index	Underweight below 18.5	21	6.0
	Normal 18.5–24.9	125	35.7
	Overweight 25–30	139	39.7
	Obese above 30	65	18.6
Mode of delivery	Normal birth	154	44.0
	Cesarean section	196	56.0
Breastfeeding status	Breastfeeds	283	80.9
	Does not breastfeed	67	19.1
Parity	Primiparous	144	41.1
	Multiparous	206	58.9
Number of pregnancies	First pregnancy	126	36.0
	Second pregnancy	97	27.7
	Third pregnancy	72	20.6
	Fourth and above pregnancy	55	15.7
Number of births	One birth	144	41.1
	Two births	106	30.3
	Three births	76	21.7
	Four births and above	24	6.9
Number of living children	1–2 children	252	72.0
	3–4 children	98	28.0

subscale mean score is 20.71 ± 4.69, "Spiritual Development" subscale mean score is 25.77 ± 4.74, "Interpersonal Relations" subscale mean score is 26.11 ± 4.60, "Stress Management" subscale mean score is 17.13 ± 4.268, and the HLBS-II mean score is 123.89 ± 21.99.

It was found that there was a significant negative relationship between the GHQ and the "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," "Interpersonal Relationships," and "Stress Management" subscales and HLBS ($p < .05$) (Table 3).

In Table 4, the "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," "Interpersonal Relationships," and "Stress Management" variables are observed to have a significant relationship with the GHQ ($R = .488$, $R^2 = .239$, $p < .05$). The fact

Table 2.
Total Mean Scores of the Healthy Lifestyle Behaviors Scale II Scale and Its Subscales and the General Health Questionnaire 12 Scale

	Minimum	Maximum	Arithmetic Mean	SD
Healthy Lifestyle Behaviors	52.00	208.00	123.89	21.99
Health Responsibility	9.00	36.00	20.73	4.77
Physical Activity	8.00	32.00	12.27	4.76
Nutrition	9.00	36.00	20.71	4.69
Spiritual Development	9.00	36.00	25.77	4.74
Interpersonal Relationships	9.00	36.00	26.11	4.60
Stress Management	8.00	32.00	17.13	4.26
General Health Questionnaire 12	00	12.00	3.57	3.09

Table 3.
Correlation Values Between the General Health Questionnaire 12 Versus Healthy Lifestyle Behaviors Scale II Scores

		General Health Questionnaire II
Health Responsibility	*r*	**-.139****
	p	**.009**
Physical Activity	*r*	**-.327****
	p	**.000**
Nutrition	*r*	**-.368****
	p	**.000**
Spiritual Development	*r*	**-.293****
	p	**.000**
Interpersonal Relationships	*r*	**-.159****
	p	**.003**
Stress Management	*r*	**-.379****
	p	**.000**
Healthy Lifestyle Behaviors	*r*	**-.343****
	p	**.000**

Table 4.
Results of Linear Regression Analysis for the Prediction of the GHQ 12 Scores by the HLB II Subscale Scores

HLBS II Subscales	*B*	Standard Error	Beta	*t*	*p*
Constant	8.908	.912		9.767	.000
Health Responsibility	.189	.046	.292	4.111	.000
Physical Activity	-.087	.043	-.133	-2.002	.046
Nutrition	-.161	.042	-.244	-3.800	.000
Spiritual Development	-.133	.052	-.204	-2.555	.011
Interpersonal Relationships	.076	.050	.112	1.505	.133
Stress Management	-.199	.053	-.274	-3.721	.000
$R = .488$	$R^2 = .239$				
$F_{(6, 343)} = 17.912$, $p = .000$					

Note: HLBS, Healthy Lifestyle Behaviors Scale.

that the "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," "Interpersonal Relations," and "Stress Management" variables had a significant effect on General Health was determined by examining the *t*-test results regarding the significance of regression coefficients.

According to the mothers' descriptive characteristics, values in terms of the "GHQ-12" total scores, "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," "Interpersonal Relationships," and "Stress Management" subscales and HLBS-II total scores are presented in Table 5.

According to the educational levels of the mothers, the differences between them in terms of the "General Health Questionnaire," "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," and "Interpersonal Relationships" subscales and HLBS scores were found to be statistically significant ($p < .05$) (Table 5).

According to the employment status of the mothers, the *t*-values related to the difference between the "General Health Questionnaire," "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," and "Stress Management" subscales and HLBS total mean scores were significant ($p < .05$).

While the "General Health Questionnaire" mean scores of unemployed mothers are observed to be higher compared to employed mothers, the "Health Responsibility," "Physical Activity," "Nutrition," "Spiritual Development," "Stress Management," and HLBS mean scores of employed mothers are observed to be higher compared to unemployed mothers (Table 5).

According to the social security of the mothers, the *t*-values related to the difference between the "Health Responsibility," "Nutrition," "Spiritual Development," "Interpersonal Relationships," and HLBS scores were found to be significant ($p < .05$) (Table 5).

According to the economic level of the mothers, the values related to the difference between them in terms of the "Health Responsibility" and "Interpersonal Relationships" subscales and HLBS scores were found to be statistically significant ($p < .05$).

According to the breastfeeding status of the mothers, the *t*-value related to the difference between the "GHQ" scores was determined to be significant ($p < .05$) (Table 5). The "GHQ" mean scores of mothers who are not breastfeeding are observed to be higher compared to breastfeeding mothers.

According to the number of births, the Kruskal wallis test (KW) values related to the difference between the "Physical Activity" and "Stress Management" subscale scores were found to be important ($p < .05$).

According to the number of living children of the mothers, the *t*-values related to the difference between the "Health Responsibility," "Physical Activity," and "Stress Management" subscales and HLBS and GHQ scores were found to be important ($p < .05$) (Table 5).

Discussion

The mother's exhibiting healthy lifestyle behaviors means "healthy mom, healthy baby." In this study, mothers total HLBS mean score was 123.89 ± 21.99. Considering that the highest score of the scale is 208, it can be said that the total mean score of the mothers is at a medium level. When the distribution of the HLBS subscale mean scores of the mothers was examined within the scope of the study, the highest mean score was determined at the interpersonal relationships dimension, the second highest mean score at the spiritual development dimension, and the lowest mean score was determined at the physical activity dimension (Table 2). Considering that the highest score of the scale is 208, it can be said that the total mean score of the mothers is at a medium level.

When the distribution of the HLBS subscale mean scores of mothers was examined in the study carried out by Hajimiri, spiritual development was determined as the dimension with the highest score and physical activity as the dimension with the lowest score (Hajimiri et al., 2018). In another study, it was determined that physical activity was the lowest mean score in mothers in the postpartum period (Süt & Seçil, 2020). In the study of Ünal et al., (2023) physical activity and stress management in the postpartum period were found to be the lowest average score.

In the present study, the high score of interpersonal relationships may be due to cultural characteristics. Turkish women, especially those during pregnancy or the postpartum period, enjoy sincere relationships with relatives more and receive help and support from their environment, particularly from their mothers.

Given the benefits of physical activity in postpartum women, including reducing bone density loss, decreasing depression symptoms, assisting with weight loss and maintenance, and improving fitness, literatures encourage physical activity during this period (Wolpern et al., 2021). In this study, considering that physical activity takes the last place in postpartum women and physical activity causes positive changes in health, it is clear that an applicable exercise program should be developed for women. Midwifery attempts that promote healthy lifestyle behaviors, especially physical activity, should be planned for women in the postpartum period.

In this study, the GHQ-12 scores were determined to decrease as the HLBS subscales and HLBS total mean scores increased (Table 3). The study by Hajimiri et al. (2018) determined that the general health of women in the postpartum period was negatively correlated with the HLBS and positively correlated with social support. In the study of Gökbulut and Bal (2021), the awareness of being healthy increases as the individual's mental well-being increases.They have proven in their studies that this awereness has increased in areas such as change,socialization, responsibility and nutrition. (Gökbulut & Bal, 2021). In another study, it was found that those who exercise regularly have higher psychological well-being than those who do not (Başar & Sarı, 2018).

The variables of the HLBS subscales were determined to be effective over the General Health Questionnaire. Mental health symptoms such as depression, anxiety, and stress have profound effects on their own well-being and the health and development of their children. An Australian study found that mothers had higher mental health symptoms 4–5 years postpartum (Bryson et al., 2021). In a study investigating the effect of physical activity on depression in the postpartum period, women who exercised at medium and high levels were determined to have a higher quality of life than those who exercised at low levels in terms of physical role, general health, social function, and mental health. Those who exercised at a high level were found to have a higher quality of life in terms of a mental role than those who exercised at a low and moderate level (Okyay, 2018).

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Table 5.
Differences in the Total Scores of GHQ 12 and HLBS and its Subdimensions According to the Descriptive Characteristics of the Mothers

		General Health Questionnaire	Health Responsibility	Physical Activity	Nutrition	Spiritual Development	Interpersonal Relationships	Stress Management	Healthy Lifestyle Behavior
		$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$
Age	18–24 years	3.72 ± 3.087	21.08 ± 4.849	13.21 ± 5.670	20.89 ± 5.071	25.70 ± 4.822	26.21 ± 4.749	17.98 ± 4.754	126.16 ± 25.390
	25–30 years	3.55 ± 3.067	20.90 ± 5.247	12.09 ± 4.409	20.93 ± 4.405	25.96 ± 4.568	26.11 ± 4.249	16.79 ± 4.021	123.93 ± 20.202
	30–34 years	2.95 ± 2.837	20.10 ± 4.021	11.69 ± 3.719	20.76 ± 4.289	25.95 ± 4.904	26.14 ± 4.875	16.69 ± 3.555	122.59 ± 19.501
	35–44 years	3.91 ± 3.348	20.42 ± 4.337	11.62 ± 4.499	19.97 ± 4.950	25.37 ± 4.843	25.89 ± 4.812	16.80 ± 4.313	121.32 ± 21.527
	Test ANOVA	F=1.129	F =.662	F=2.135	F=.676	F=.254	F =.065	F=2.017	F =.735
		p =.337	p =.576	p =.096	p=.567	p =.858	p =.978	p =.111	p =.532
Educational status	Primary school	4.10 ± 3.014	19.64 ± 3.845	10.95 ± 3.901	19.49 ± 4.500	24.92 ± 4.686	25.74 ± 4.450	16.56 ± 3.918	118.53 ± 19.188
	Secondary-high school	3.72 ± 3.248	20.57 ± 4.935	12.04 ± 4.741	20.49 ± 4.630	25.61 ± 4.900	25.82 ± 4.650	17.14 ± 4.415	122.76 ± 22.168
	Faculty-college	2.51 ± 2.501	22.50 ± 4.925	14.50 ± 5.077	22.76 ± 4.483	27.22 ± 4.050	27.31 ± 4.490	17.82 ± 4.184	133.43 ± 22.076
	Test ANOVA	F=5.889	F=7.654	F=12.203	F=10.635	F=5.019	F=3.137	F=1.749	F=10.137
		p =.003	p =.001	p =.000	p =.000	p=.007	p=.045	p=.175	p=.000
	Difference	1–2>3	3>1–2	3>1–2	3>1–2	3>1–2	3>1–2	–	3>1–2
Employment status	Employed	2.26 ± 2.863	22.26 ± 5.741	15.91 ± 6.051	22.47 ± 5.252	27.28 ± 5.470	26.44 ± 5.114	18.72 ± 5.030	133.95 ± 28.170
	Unemployed	3.75 ± 3.083	20.52 ± 4.591	11.76 ± 4.330	20.46 ± 4.564	25.56 ± 4.596	26.06 ± 4.526	16.91 ± 4.098	122.49 ± 20.654
	t test	t= -3.006	t=1.902	t=4.339	t=2.643	t=2.245	t =.512	t=2.636	t=2.574
		p =.003	p =.063	p =.000	p =.009	p =.025	p =.609	p =.009	p =.013
Social security	Available	3.59 ± 3.127	21.01 ± 4.801	12.38 ± 4.878	20.90 ± 4.735	26.08 ± 4.565	26.51 ± 4.396	17.24 ± 4.238	125.33 ± 21.646
	Not available	3.44 ± 2.881	18.87 ± 4.159	11.56 ± 3.882	19.40 ± 4.213	23.67 ± 5.372	23.38 ± 5.029	16.38 ± 4.360	114.16 ± 22.102
	t test	t=.288	t=2.836	t=1.278	t=2.013	t=3.231	t=4.375	t=1.273	t=3.224
		p =.773	p =.005	p =.206	p =.045	p =.001	p =.000	p =.204	p =.001
Parity	Primiparous	3.30 ± 3.011	20.76 ± 4.899	12.68 ± 4.697	21.13 ± 4.581	25.92 ± 4.838	26.31 ± 4.813	17.33 ± 4.223	125.31 ± 23.164
	Multiparous	3.76 ± 3.142	20.71 ± 4.693	11.99 ± 4.802	20.41 ± 4.757	25.67 ± 4.675	25.96 ± 4.444	16.99 ± 4.286	122.90 ± 21.139
	t test	t=–1.367	t=.106	t=1.345	t=1.413	t=.488	t=.703	t=.741	t=1.009
		p=.172	p=.915	p=.180	p=.158	p=.626	p=.482	p=.459	p=.314
Number of pregnancies	First pregnancy	3.27 ± 3.045	20.66 ± 4.938	12.64 ± 4.695	21.21 ± 4.764	25.77 ± 4.888	26.16 ± 4.888	17.38 ± 4.287	124.99 ± 23.589
	Second	3.58 ± 2.996	21.24 ± 5.632	12.59 ± 5.182	20.56 ± 4.785	25.93 ± 5.048	26.08 ± 4.769	17.32 ± 4.217	124.71 ± 22.946
	Third	3.56 ± 3.016	20.43 ± 4.225	12.06 ± 4.855	20.25 ± 4.503	25.26 ± 4.269	25.25 ± 4.546	16.83 ± 4.169	121.26 ± 20.858
	4th and above	4.25 ± 3.428	20.40 ± 3.183	11.15 ± 3.889	20.44 ± 4.630	26.15 ± 4.466	27.15 ± 3.391	16.62 ± 4.420	123.38 ± 17.802
	test ANOVA	F=1.298	F=.555	F=1.477	F=.796	F=.423	F=1.789	F=.589	F=.500
		p=.275	p=.645	p=.221	p=.497	p=.737	p=.149	p=.622	p=.682

(*Continued*)

Table 5.
Differences in the Total Scores of GHQ 12 and HLBS and its Subdimensions According to the Descriptive Characteristics of the Mothers (Continued)

		General Health Questionnaire	Health Responsibility	Physical Activity	Nutrition	Spiritual Development	Interpersonal Relationships	Stress Management	Healthy Lifestyle Behavior
		$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$	$\bar{x} \pm SD$
Number of births	One birth	3.35 ± 3.046	20.76 ± 4.899	12.69 ± 4.689	21.12 ± 4.593	25.89 ± 4.849	26.31 ± 4.813	17.29 ± 4.216	125.26 ± 23.201
	Two births	3.56 ± 3.015	21.25 ± 5.391	12.69 ± 5.179	20.71 ± 5.056	26.18 ± 4.818	26.04 ± 4.692	17.79 ± 4.309	125.60 ± 22.782
	Three births	3.57 ± 3.026	20.11 ± 3.918	11.42 ± 4.470	20.25 ± 4.135	25.00 ± 4.233	25.63 ± 4.273	16,.4 ± 4.012	120.00 ± 19.145
	Four births and above	4.96 ± 3.712	20.21 ± 3.270	10.58 ± 3.586	19.71 ± 5.262	25.67 ± 5.206	26.67 ± 3.875	16.38 ± 4.614	120.50 ± 18.486
	Test	KW = 4.575	KW = 2.806	KW = 10.290	KW = 4.351	KW = 5.044	KW = 1.684	KW = 10.102	KW = 5.804
	KW H	*p* = .206	*p* = .422	*p* = .016	*p* = .226	*p* = .169	*p* = .640	*p* = .018	*p* = .122
	Dunnet's T3								
	Post Hoc								
	Difference	–	–	1–2>4	–	–	–	2>3	–
Number of living children	1–2 children	3.46 ± 3.035	21.01 ± 5.123	12.77 ± 4.895	21.01 ± 4.775	26.03 ± 4.833	26.21 ± 4.775	17.54 ± 4.254	125.69 ± 22.998
	3–4 children	3.86 ± 3.233	20.02 ± 3.647	10.99 ± 4.168	19.94 ± 4.404	25.09 ± 4.435	25.83 ± 4.109	16.08 ± 4.103	119.28 ± 18.491
	t test	*t* = –1.089	*t* = 2.016	*t* = 3.411	*t* = 1.921	*t* = 1.671	*t* = .708	*t* = 2.907	*t* = 2.714
		p = .277	*p* = .045	*p* = .001	*p* = .056	*p* = .096	*p* = .479	*p* = .004	*p* = .007
Economic status	Good	3.56 ± 2.976	21.30 ± 5.473	12.63 ± 5.614	21.30 ± 5.232	26.34 ± 5.269	27.11 ± 5.168	17.64 ± 4.825	127.36 ± 26.315
	Medium	3.51 ± 3.118	20.81 ± 4.473	12.18 ± 4.560	20.75 ± 4.553	25.80 ± 4.448	26.17 ± 4.287	17.08 ± 4.089	124.02 ± 20.115
	Poor	4.03 ± 3.198	18.84 ± 5.081	12.22 ± 4.405	19.09 ± 4.276	24.28 ± 5.496	23.38 ± 4.675	16.44 ± 4.235	115.38 ± 24.060
	Test	*F* =.399	*F* = 3.074	*F* =.246	*F* = 2.482	*F* = 2.110	*F* = 7.642	*F* = .950	*F* = 3.315
	ANOVA	*p* =.672	*p* =.047	*p* =.782	*p* =.085	*p* =.123	*p* =.001	*p* =.388	*p* =.037
	Fark	-	1–2>3	–	–	–	1–2>3	-	1–2>3
Body mass index	Underweight	4.19 ± 2.822	19.29 ± 3.258	10.76 ± 3.961	18.86 ± 4.304	25.57 ± 3.529	25.62 ± 4.225	15.33 ± 2.869	116.71 ± 15.301
	Normal	3.25 ± 3.220	21.03 ± 5.431	12.71 ± 5.273	20.91 ± 4.654	25.70 ± 4.806	26.14 ± 4.751	17.51 ± 4.562	125.14 ± 24.202
	Overweight	3.53 ± 2.915	20.84 ± 4.699	12.55 ± 4.654	20.86 ± 4.951	25.78 ± 4.975	26.08 ± 4.605	17.19 ± 4.384	124.47 ± 22.573
	Obese	4.06 ± 3.269	20.38 ± 3.884	11.32 ± 4.016	20.60 ± 4.264	25.94 ± 4.507	26.26 ± 4.477	16.85 ± 3.615	122.60 ± 17.576
	test	KW = 5.363	KW = 2.464	KW = 6.960	KW = 3.477	KW = .448	KW = .567	KW = 4.324	KW = 2.600
	KW	*p* =.147	*p* =.482	*p* =.073	*p* =.324	*p* =.930	*p* =.904	*p* =.228	*p* =.457
	H test								
Mode of delivery	Normal birth	3.36 ± 3.016	20.88 ± 4.626	12.19 ± 4.765	20.72 ± 4.326	26.00 ± 4.607	26.27 ± 4.321	17.49 ± 4.127	124.64 ± 20.124
	Cesarean section	3.73 ± 3.149	20.61 ± 4.892	12.33 ± 4.776	20.70 ± 4.972	25.59 ± 4.841	25.98 ± 4.808	16.85 ± 4.347	123.31 ± 23.394
	t test	*t* = –1.134	*t* =.527	*t* = –.266	*t* =.043	*t* =.810	*t* =.579	*t* =1.387	*t* =.559
		p =.257	*p* =.599	*p* =.790	*p* =.966	*p* =.419	*p* =.563	*p* =.166	*p* =.577
Breastfeeding status	Yes	3.32 ± 2.975	20.86 ± 4.892	12.34 ± 4.823	20.95 ± 4.747	25.76 ± 4.849	25.98 ± 4.605	17.28 ± 4.332	124.38 ± 22.495
	No	4.63 ± 3.370	20.18 ± 4.217	12.00 ± 4.536	19.69 ± 4.339	2.82 ± 4.267	26.63 ± 4.556	16.51 ± 3.894	121.85 ± 19.766
	t test	*t* = –3.155	*t* =1.054	*t* =.518	*t* =1.991	*t* = –.100	*t* = –1.032	*t* =1.336	*t* =.845
		p = .002	*p* =.293	*p* =.605	*p* =.047	*p* =.920	*p* =.303	*p* =.183	*p* =.398

As a result of the advanced analysis concerning the educational status of women in the postpartum period, the HLBS scores of mothers who graduated from faculty-college were determined to be higher compared to mothers who graduated from primary, secondary, and high school. In a study, it was found that female workers who are high school and university graduates have higher scores on healthy lifestyle behaviors than those with primary education and less education (Öztoprak & Ege, 2021). In another study, it was determined that as the level of education increased, there was a positive increase in the subdimension of interpersonal relations and health responsibility (Değerli & Yiğit, 2020).

Employed mothers' HLBS and subdimension mean scores are observed to be higher in comparison with unemployed mothers (Table 5). In a study of adults in China, those with low income or education levels were found to have a lower tendency toward healthy lifestyle behaviors (Zhang et al., 2021). The employment status is closely related to the socioeconomic and educational level. Mothers' working offers an opportunity to improve their economic level, and besides doing healthcare practices more, it can provide additional opportunities to get rid of stress, broaden social support opportunities, and maintain mental health.

According to the economic level of the mothers, there was a difference between their HLBS mean scores. Mothers with good and medium economic status were determined to have higher health responsibility and interpersonal relationships subscales and HLBS scores compared to mothers with poor economic status. In a study conducted to determine the healthy lifestyle behaviors of seasonal agricultural workers, the HLBS score was determined by the work experience of workers working for 5 years or more. The average was higher (Göçer et al., 2020). It can be said that mothers with good economic status are more likely to engage in health behaviors such as consulting a dietitian for proper nutrition, going to sports centers for physical activity.

In this study, the GHQ-12 mean score was determined to be 3.57 ± 3.09. In a study of 1260 women of reproductive age in India, mental health was found to be lower in the postpartum period (Kar & Samantaray, 2022). In another study, the overall prevalence of postnatal psychological distress (GHQ-12 score ≥ 4) among young women was 21.9% (Khanna et al., 2021).

As a result of the advanced analysis performed according to the educational status of women in the postpartum period, mothers who were faculty-college graduates were determined to have higher GHQ scores than mothers who were primary, secondary, and high school graduates. In his study, Wesselhoeft et al. found that mothers with low education levels were prone to significant depressive symptoms (Wesselhoeft et al., 2020).

Unemployed mothers are observed to have higher general health mean scores than employed mothers. Najafi et al. (2020) reported a slightly higher incidence of mental health problems among socioeconomically disadvantaged adults in Iran. Since unemployed mothers can represent the group that has financial difficulties, poor mental health should be aimed to be prevented.

In this study, mothers who do not breastfeed have higher GHQ mean scores than breastfeeding mothers. Breastfeeding provides many health benefits for the mother and child. Breast milk is the best food for a newborn baby; it contains all the nutrients they need for healthy growth and development (Mikšić et al., 2020). The poor mental health of the mother in the postpartum period causes the baby to not be fed well and the physical health of the baby and the mother to deteriorate. It can be said that most of the mothers have a lot of anxiety about breastfeeding, and they have negative ideas about whether their milk is sufficient or not (Çalışkanyürek et al., 2022). In the study by Islam et al., the depression level (8.6%) was found to be the lowest in mothers who were only breastfeeding (Islam et al., 2021).

Study Limitations

Not including mothers who were mentally disabled, illiterate, or pregnant and mothers who had a health problem in the study and collection of the study data from one institution are the limitations of the study.

Conclusion and Recommendations

In this study, the subdimensions of healthy lifestyle behaviors were found to affect the general health status of mothers. Healthy lifestyle behaviors have an important place in maximizing the mental health of mothers. Promoting physical activity and weight loss is important in the postpartum period to alleviate the depressive symptoms of mothers and improve their quality of life. Encouraging mothers to engage in physical activity can be considered as a motivating factor in mother education programs in the antenatal and postnatal period. Increasing postpartum physical activity, reaching the appropriate diet program for the physical health of the mother and the baby, the trainings given by the midwives, and the social support provided by the environment to the mother increase the positive health behaviors and mental vitality of the mothers.

It is important for midwives to guide mothers to maintain this period in a healthy way and to develop healthy behaviors. In this period, it is important to plan guidance services such as returning to the desired weight, stress management, breastfeeding and proper nutrition for physical health, and planning of physical exercise. It is recommended that mothers be counseled about how to adapt to new behaviors and how to manage the process correctly.

It is recommended that more studies be conducted on the factors affecting the general health status of mothers' healthy lifestyle behaviors in the postpartum period.

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Genişletilmiş Özet

Doğum sonrası dönem, annelerin yaşamlarında kritik bir geçiş dönemidir. Doğumdan sonra başlayıp, ve 1 ile 3 yıl arasında süren bu dönem çeşitli fizyolojik, psikososyal ve duygusal değişiklikler görülmektedir. Bu dönem anneler ve yenidoğan için mortalite ve morbidite açısından risklidir. Annelerin yeni sürece adapte olması ve değişimlerle baş edebilmesi için sağlıklı yaşam biçimi davranışları önem kazanmaktadır. Anne ve bebek ölüm oranlarının azaltılması, meydana gelebilecek sağlık problemleri ile baş edebilmek için sağlıklı yaşam biçimi davranışları sergilemek önemlidir. Annelerin sağlıklı olması bebeklerin sağlığını da etkilediği için sağlıklı yaşam biçimi davranışları üzerinde durulması gereken konulardan biridir. Sağlıklı yaşam biçimi davranışları; sağlık davranışlarının sorumluluğunu alma, dengeli beslenme, yeterli ve düzenli egzersiz yapma, sigara kullanmama, sağlık sorumluluğu, hijyenik önlemler alma, kişiler arası olumlu ilişkiler kurma ve stres yönetimi şeklinde sıralanabilir.

Anneler doğum sonrası dönemdeki sorumluluklar, zorluklar ve beklentiler ile fiziksel ve duygusal değişime girerler. Bu değişimler sağlıklı yaşam biçimi davranışları ile kolaylaşmaktadır. Annenin mental iyi oluşluğu sağlıklı yaşam biçimi davranışları da etkilemektedir. Yeni bir duruma uyum ile birlikte çok sayıda sorumluluk, yalnızca annenin sağlık davranışlarını etkilemekle kalmayıp, aynı zamanda yaşam kalitesini ve fiziksel ve zihinsel esenliğini de tehdit edebilir. Ayrıca annenin genel sağlık durumunu farklı boyutlarıyla ele alan araştırmalarda doğum sonu dönemde görülen psikiyatrik bozuklukların önemli nedenleri arasında sosyal destek yetersizliği, eşler arasında uyumsuzluk ve stresli yaşam şartları gösterilmektedir Doğum sonrası dönemde aldıkları kiloları vermek isteyen annelerin fiziksel aktivitiye ihtiyacı vardır. Emzirme sürecinde bebeğin gelişimi için de doğru beslenmeye gereksinim duyarlar. Doğum sonrası dönemdeki sağlıklı yaşam biçimi davranışlarından biri olan fiziksel aktivite annelerin hem fiziksel hem de zihinsel sağlığına önemli katkıda bulunmaktadır. Bu çalışma doğum sonrası birinci yılda annelerin genel sağlık durumunun sağlıklı yaşam biçimi davranışlarına etkisinin değerlendirilmesi amacıyla yapılmıştır.

Bu araştırma kesitsel tipte bir araştırma olup Mayıs-Haziran 2019 tarihleri arasında Sakarya Akyazı 3 Nolu Aile Sağlığı Merkezi'nde yapılmıştır. Araştırma evrenini Sakarya Akyazı 3 Nolu Aile Sağlığı Merkezi'ne kayıtlı 20.000 kadın oluştururken örneklemini, Mayıs 2019-Haziran 2019 tarihler arasında başvuran ve araştırmaya katılmayı kabul eden, örneklem hesabı kullanılarak seçilen 350 anne oluşturmuştur. Hesaplamalar sonucunda örnekleme 376 kişi dahil edilmiştir. Fakat 26 kişinin vermiş olduğu verilerin sağlıksız olması sonucunda örneklem 350 kişiye düşürülerek çalışma yapılmıştır. Verilerin toplanmasında 'Kişisel Bilgi Formu', 'Genel Sağlık Anketi G12' ve 'Sağlıklı Yaşam Biçimi Davranışları Ölçeği II' kullanılmıştır. Araştırmaya başlamadan önce İl Sağlık Müdürlüğü'nden ve Aile Sağlığı Merkezi'nden izin alınmıştır. Çalışma sırasında katılımcılardan sözlü onamları alınmıştır.Verilerin kodlanması ve değerlendirilmesi bilgisayar ortamında Statistical Package of Social Sciences 22.0 paket programı kullanılarak yapılmıştır. Verilerin normali dağılıma uygunluğunu anlamak amacıyla Skewnes-Kurtosis analizleri yapılmıştır.

Araştırmada annelerin Sağlıklı Yaşam Biçimi Davranışları Ölçeği toplam puan ortalaması 123.89 ± 21.99 dir. Alt ölçek puan ortalamaları incelendiğinde sağlık sorumluluğu" 20.73 ± 4.77, fiziksel aktivite 12.27 ± 4.76, beslenme 20.71 ± 4.69, manevi gelişim 25.77 ± 4.74, kişilerarası ilişkiler 26.11 ± 4.60 olduğu, stres yönetimi 17.13 ± 4.26 bulunmuştur. Ölçeğin en yüksek puanı 208 olduğu göz önüne alındığında, annelerin toplam puan ortalamasının orta seviyede olduğunu göstermektedir. Araştırma kapsamında annelerin Sağlıklı Yaşam Biçimi Davranışları Ölçeği alt boyut puan ortalamalarının dağılımları incelendiğinde en yüksek kişilerarası ilişkiler ikinci sırada manevi gelişim en düşük puan ortalamasında fiziksel aktivite olarak tespit edilmiştir. Araştırmada Genel Sağlık Anketi 12 puan ortalamasının 3.57 ± 3.09 olduğu belirlenmiştir. Araştırma bulgularına göre Sağlıklı Yaşam Biçimi Davranışları alt boyutları ve Sağlıklı Yaşam Biçimi Davranışları toplam puan ortalamaları arttıkça Genel Sağlık Anketi 12 puanlarının azalmakta olduğu bulunmuştur. Doğum sonrası dönemde anneler genel sağlık durumlarını iyi olarak algılasalar bile fiziksel sağlık sorunları oldukça yaygındır. İlk kez anne olanlar ve işe geri dönmek zorunda olanlar, zaman veya aktiviteler üzerindeki kısıtlamalarla karşı karşıya kaldıklarında sağlıklı yaşam biçimi davranışları sergilemek zorlaşmaktadır. Genel stres hissi, kişiler arası ilişkilerin yeniden düzenlenmesindeki güçlükler ve sağlığı teşvik edici davranışlarda bulunamama, annelerin genel sağlık düzeyinde bir düşüşe neden olmaktadır.. Annedeki depresif belirtiler annenin yeni rollerini etkin bir biçimde yerine getirmesini ya da daha sonraki yaşamında sağlığını etkileyebilecek sağlığı geliştirici yaşam biçimi davranışlarını imkansız hale getirmektedir.

Doğum sonrası dönemde kadınların sağlığını geliştirmeye yönelik müdahaleler, yaşamın ilerleyen dönemlerinde riskli davranışların birikmesinin sonuçlarını değiştirebilir ve kişisel sağlığı ve refahı artırabilir. Sağlıklı yaşam biçimi davranışlarının kazanılması, bireylerin bilgi, düşünce ve değer yargılarının değiştirilmesi ile mümkündür. Annelerin bu dönemle ilgili değişimlerle ilgili baş etmede sağlıklı yaşam biçimi davranışlarını geliştirerek yaşam kalitesini arttırmada kullanılabilecek etkili yöntemlerden biri de teşvik ve motive edici görüşmelerdir. Bu nedenle annelere sağlıklı yaşam biçimi davranışlarının genel sağlık durumunu nasıl etkilediği, risk faktörleri ile ilgili eğitim ve danışmanlık hizmeti verilmesi önemlidir. Doğum sonrası dönemde meydana gelen değişiklerle baş edebilmesi, yeni rol ve sorumluluklara adapte olabilmesi annenin tek başına sorumluluğunda olmadığı anlaşılması gerekir. Bu süreçte anneye sosyal destekte bulunması gereken eş, aile üyeleri ve çevresine de gerekli eğitimlerin verilmesi önem taşımaktadır. Doğum sonrası annelerin sağlığı teşvik edici davranışları edinebileceği destek hizmetlerine ve sağlık hizmetlerine erişimi sağlanması gereklidir.